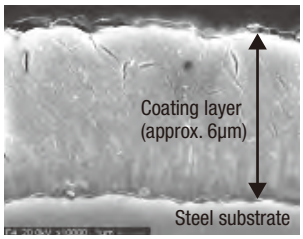
Coated Products

Surface treatment technology in a small scale (10^{-9} to 10^{-6} meter) has a possibility to improve corrosion resistance and other functional properties of steel sheets for various uses. Coated Products Research Department is developing coated steel sheets through leading technologies in advanced hot-dip galvanizing, surface modifications and chemical conversion technologies.

Hot Dip Galvanizing Technology

Hot-dip galvanizing is a cost-effective process which can provide corrosion resistance to steel sheets.
Various properties such as high strength, formability and excellent surface appearance are required for steel sheets especially for automotive applications. We are developing new products which meet such high quality requirements of our customers using cutting-edge "Hot-Dip Galvanizing simulators".

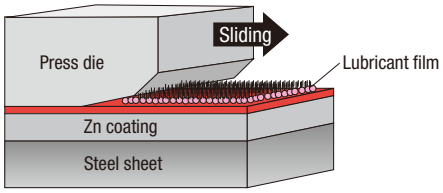
Hot-Dip Galvanizing simulator

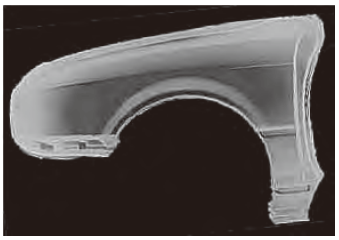


Cross sectional image of Hot-dip galvanized coating

Surface Modification Technology

Surface modification technology for satisfying customer's demands has been studied. "JAZ™" (JFE Advanced Zinc) with an unique surface modification can provide excellent lubricate property and greatly improve press formability of steel sheets for automotive panels.

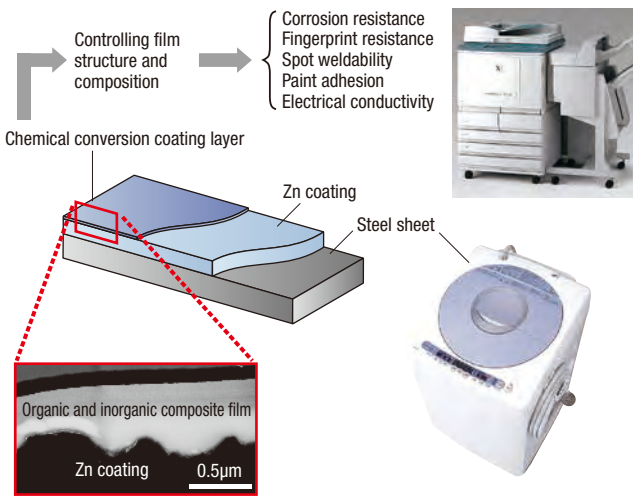




Front fender model panel ("JAZ™" JFE Zn coated steel sheet with excellent lubrication)

Chemical Conversion Coating Technology

Steel sheet for home electrical appliances and office automation equipment requires various functions such as corrosion resistance, fingerprint resistance and electrical conductivity. Advanced chemical conversion treatment in nanometer scale is key technologies for satisfying these demands.



Cross section of chemical conversion on zinc coating Application example

Designs of Corrosion Resistance of Steel Sheet Products

We are developing solution technologies regarding corrosion resistance of coated steel products. Our scope is to clarify corrosion mechanism and propose appropriate materials using reliable evaluation methods and monitoring techniques.

Atmospheric exposure test of actual automobile door parts (in Okinawa)

Monitoring technique for automobiles